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TESTIMONY OF
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OF THE HOUSE COMMITTEE ON GOVERNMENT REFORM
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I appreciate the opportunity to speak on the critically important issue of nuclear safety, particularly regarding whether the Nuclear Regulatory Commission (NRC) has adequately strengthened safety standards for nuclear power plants since 9/11.

Connecticut's experience and a recent Government Accountability Office (GAO) study demonstrate the urgent need for renewed and reinvigorated NRC action to ensure the safety and security of our nation's nuclear power stations in this age of terrorism. Congressional action is critical because nearly 25% of our country's electricity is generated at 103 nuclear power stations -- many located near major population centers.

Congress should:

- Require NRC to give priority to national defense and homeland security experts in making the ultimate determination as to the type of possible attack on nuclear power plants -- and reduce the NRC's reliance on nuclear power plant operators in making such decisions

- Demand that the Design Basis Threat (DBT) give greater emphasis to potential threats to spent fuel pools. The DBT currently focuses on the nuclear power plant itself. Spent fuel pools often contain significantly higher amounts of radioactive materials than the reactor.

- Carefully review the DBT to ensure adequate consideration of certain types of potential attack -- by planes larger than Boeing 707 airliners for example, and other threats -- and recommend effective measures to deter such strikes

I have been deeply involved in safety and security issues at nuclear power plants because Connecticut is home to the Millstone Nuclear Power Plants and nearly one third of Connecticut's population lives within the 50 mile possible contamination zone of the Indian Point Nuclear Power Plant in Buchanan, New York. Radiation from an attack or accident could quickly create

a major public health crisis or catastrophe. In the event of an accident or attack, millions of people will need to be evacuated either from or through Connecticut on our three interstate highways. Losing a major generating facility at a time of peak demand could cause paralyzing regional blackouts creating turmoil and panic.

Forestalling attacks on these facilities must be an urgent priority.

Persistent reports of inadequacies in security planning at many nuclear facilities should compel Congress to require stronger action by the NRC. Despite clear calls to action, based on compelling evidence, the NRC has failed to address adequately security issues at Indian Point and whistleblower allegations at Millstone. The GAO report provides glaring accounts of NRC failure to adequately plan for terrorist attacks on our nuclear facilities.

Indian Point is a serious security and safety risk. The nuclear power plant operators have compiled an unacceptable records of abject, repeated, multi-year failure to effectively address vital safety and security issues. My office and New York-based Riverkeeper, Inc. have filed numerous administrative actions and court challenges to the demonstrably inadequate radiological emergency preparedness plan (REPP). There have been published reports of the potentially inadequate design of the reactor protection system and repeated failures of the facility's onsite electrical safety systems since 1999.

Yet, the NRC has consistently and repeatedly rebuffed requests -- from me as well as other public officials and citizen groups -- for NRC reviews and audits of the emergency preparedness systems at the Indian Point Nuclear Power Plant. This facility is only a few miles from the Connecticut border. Several New York and Connecticut senators and congressmen have submitted legislation -- which I support -- requiring a thorough, comprehensive NRC review.

Yesterday, I called on the NRC to immediately investigate the source and extent of radiation contamination at Indian Point. Last week, the plant operators admitted that radiation levels in wells as close as 50 yards from the Hudson River were three times the allowable levels for drinking water. The operators and regulators agree that the radioactive strontium-90 has found its way into the Hudson River. Strontium-90 is so dangerous to infants that its dissemination as part of the fallout from nuclear weapons testing led to the ban on above-ground weapons testing.

The NRC has also failed to address adequately allegations by a Connecticut whistleblower regarding the Millstone Power Plant. The whistleblower, a former employee at the Millstone Nuclear Power Plant, complained about failures of the plant's perimeter security system caused by false alarms. When these false alarms occur, the alarm system may be shut down entirely. Evidently, this problem has persisted for some time.

As troubling as this security deficiency, is the claimed retaliatory dismissal of this whistleblower employee. No facility can be safe if it punishes employees who speak out seeking to enhance safety. While the NRC has been silent, the Connecticut Department of Public Utility Control has reviewed the allegations and opened a public docket on the issues.

Congress can compel the NRC to be more effective in monitoring and scrutinizing safety systems. A culture and rule of safety, rather than intimidation, must be enforced at every nuclear power station.

I have some specific comments about the GAO report on the NRC's Design Basis Threat.

Design Basis Threat

The central core of design basis threat analysis is the proper assessment of various possible forms of attack on nuclear power plants. The NRC appropriately consulted with various defense and homeland security experts to develop this assessment. Inexplicably, the NRC weakened the list of potential forms of attack by allowing the operators of the nuclear power plants -- who have fiscal reasons to reduce the expenses involved in defending themselves from these possible attacks -- to edit and change the assessment. In particular, the NRC concluded that multiple terrorist cells are unlikely to attack one nuclear power plant. Yet, multiple attacks at one site are precisely what occurred on September 11, 2001.

The resulting assessment fails to fully reflect the defense and homeland security expert comments as to various possible forms of attack and, consequently, fails to adequately address the types of attack that were deleted or minimized.

Al Qaida has not hidden its intention to strike "decisive blows" against the United States Economic targets, particularly including energy supply infrastructure systems, have been attacked by Al Qaida in other countries, including Saudi Arabia and Iraq. An Al Qaida spokesman has stated that while they initially chose not to attack nuclear power stations, circumstances have changed and such facilities are considered legitimate targets. Published news reports have indicated -- for example -- that plans for the Indian Point power station have been found in a cave in Afghanistan purportedly used by Al Qaida.

We know all too well that Al Qaida has demonstrated an intention and capacity to stage medium to large scale terrorist attacks on U.S. soil. Terrorist use of multiple attackers -- 19 in 9/11 for example -- means that the NRC must mandate that nuclear power stations be prepared to defend successfully against a substantial organized force. There is no reason to believe that NRC's current, supposedly enhanced DBT assumes threats from more than a handful of attackers. To the contrary, the DBT is predicated on the clearly dubious assumption that an attacking force will be much smaller. This assumption is certainly disputable and compromises the entire security plan.

Similarly, the GAO report noted that the NRC removed from the design basis threat two types of weapons that NRC staff recommended for inclusion. This step followed objections from the nuclear power plant operators.

The attacks on the Khobar Towers in Saudi Arabia and the U.S.S. Cole, the train bombings in Madrid and the attack on the school in Beslan demonstrate the willingness of terrorists to use every available weapon -- even very sophisticated and advanced weapons -- to

achieve their goal. We cannot accept the NRC arbitrarily removing potent weapons from the design basis threat assessment to satisfy industry objections.

Another key element of any security plan is the need for periodic testing to determine the continued effectiveness of the overall system. Unfortunately, the testing of security at nuclear power stations is so unrealistic as to be nearly meaningless. It has been described as a farce by some experts, and as questionable by the GAO.

The current NRC guidelines require periodic "force on force" exercises, designed to imitate an actual attack to be met and repelled by the plant's security teams. There are several major flaws in the current system.

The "attacking force" in every exercise has been undersized, in part because of mistaken assumptions about the attacking force. A more realistic assumption is that some or all of the attackers will be suicide bombers, including individuals dressed as plant workers, visitors, or even police (all tactics used by existing terrorists), carrying explosive vests or driving bomb-laden trucks. Multiple attacks on nearby public buildings and roadside bombs designed to impede or divert responding police or National Guard troops should also be included in the scenarios.

An even more basic flaw exists in the current testing system: The same company that protects the plants provides the attacking teams, and all of the "defenders" are notified of the "surprise" attack well beforehand. This approach gravely undermines the validity of the training tests.

Spent Fuel Pools

Most of the radioactive material at the nation's 103 power stations is contained in spent fuel pools, not in the reactors. Once a certain amount of the uranium in the fuel rods has passed its half-life and decayed so that it is no longer usable as fuel, the rods are removed from the reactor and placed in a water-filled spent fuel pool to cool down. While no longer suitable for use as fuel, the rods remain highly radioactive. Lacking a central repository, these fuel rods have accumulated in the pools -- in some cases for decades. Consequently, most power plants have several times as much radioactive material in the fuel pools as in the reactors.

From a security perspective, there are two problems. The first relates to storage separated from reactors, which are almost universally housed in thick steel reinforced concrete containment domes. These domes are hardened massive bunkers that can resist most explosive attacks, but most of the dangerous radioactive material is stored outside the containment domes, in far more accessible and less protected fuel pools.

In fact, most such spent fuel pools are effectively comparable to large swimming pools covered by a simple steel industrial building. These structures are exceedingly vulnerable to truck bombs or even smaller explosives. Relatively slight damage to a fuel pool may result in release of radioisotopes.

If a pool is breached, a loss of cooling water will lead quickly to a buildup of heat from the fuel rods. This heat, if not abated, will cause the cladding on the rods to ignite. The resulting fire will release radioactive uranium in the form of radioactive dust rising on the heat plume. Thus, an attacking force may generate a cloud of radioactive fallout by over-coming outer plant security and breaching the highly vulnerable fuel pool. Other well-established terrorist tactics include the use of booby-traps or improvised explosive devices (IEDs) left behind to hinder response efforts.

The design basis threat assessment should be amended to ensure adequate assessment of the risk of attacks on the spent fuel pools.

Air Exclusion Zone

Security for a nuclear power plant must include more than armed guards and a perimeter fence. The NRC must seriously consider attacks from the air. While the Commission has stated that existing containment domes can resist impacts from airliners, this view must be reevaluated. Specifically, NRC has traditionally relied on a decades old analysis of the potential impact from a Boeing 707 airliner. Many newer aircraft are much larger and heavier. Congress should compel the NRC to reexamine the issue of whether 30 year old concrete containment domes can resist an impact from the current generation of aircraft.

The NRC should also establish an air-exclusion zone. As I have repeatedly raised with the NRC, if Disney World merits a no-fly zone, a similar aircraft exclusion zone should be required for nuclear power stations.

The NRC needs to think broadly, perhaps outside the box, about security threats -- thinking the unthinkable. At a recent NRC annual assessment hearing on the Millstone Nuclear Power Plant, I urged the NRC to consider additional threats from liquefied natural gas (LNG) tankers that would pass near the plant -- located directly on Long Island Sound -- as part of the proposed Broadwater project. These LNG tankers can carry up to 250,000 cubic feet of liquid methane -- a cargo so flammable that the Coast Guard is currently investigating how large a security zone must surround the tankers to protect the public from the massive conflagration that could be caused by an attack or accident.

In summary, our nation's nuclear power facilities are dangerously vulnerable. Congress should move the NRC to act far more effectively and decisively to protect those plants, and all Americans, from a possible terrorist attack.

I urge this committee to act forcefully and expeditiously.